

Work Order ID 156160

Friday, January 27, 2017 11:18:35 AM

156160

Page 1

Item ID: 650.8804

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Pilot Handle and Cable Assembly (3G2560V01731)

Start Date: 1/27/2017 Start Qty: 2.00

2

Cust Item ID:

Required Date: 1/30/2017 Req'd Qty: 2.00

2

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

Draw Nbr

Revision Nbr

100

0.00

100

Purchasing

Memo

Issue PO

Purchasing

110

Receive & Inspect for Damage & Mat'l Certs

0.00

110

Packaging

Memo

Packaging

120

QC6- Inspect dimensions to drawing

0.00

120

QC

Memo

Quality Control

2 DAS
6
9-89

JAN 27 2017

22

DAS
16
9-89

2017/01/30

Work Order ID 156160

Friday, January 27, 2017 11:18:35 AM

156160

Page 2

Item ID: 650.8804

Accept

N900040100

Setup Start

NS1

Revision ID:

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NS2

Item Name: Pilot Handle and Cable Assembly (3G2560V01731)

Start Date: 1/27/2017

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Required Date: 1/30/2017

Req'd Qty: 2.00

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Customer:

Reference:

Approvals:

Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run Start

NR1

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

NR2Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

130

Identify as per dwg & Stock Location: *phg*

0.00

130

Packaging

Memo

0.00

Packaging

MF 17-01-30

140

QC21- Final Inspection - Work Order Release

0.00

140

QC

Memo

0.00

Quality Control

17/01/30
MF
17-1-30

Picklist Print

Friday, January 27, 2017 11:18:35 AM

Page 1

Work Order ID: 156160

156160

Parent Item: 650.8804

650 8804

Parent Item Name: Pilot Handle and Cable Assembly (3G2560V01731)

Start Date: 1/27/2017

Required Date: 1/30/2017

Start Qty: 2.00

Required Qty: 2.00

Comments:

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
650.8804P		Purchased	No				Each	0.0000		2			

650 8804P

Pilot Handle and Cable Assembly (3G2560V01731)

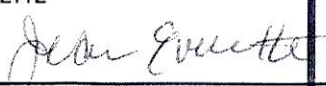
**

JAN 27 2017

DAS
6
9-89

SHIPPER'S DECLARATION FOR DANGEROUS GOODS

(Provide at least three copies to airline.)

Shipper JEAN EVERETTE APICAL INDUSTRIES, INC. dba DART 3030 ENTERPRISE COURT SUITE A VISTA CA 92081 US		Air Waybill No. 624359975577 Page 1 of 1 Page(s) Shipper's Reference Number (optional)	
Consignee Caitlin/Pat Smith Dart Aerospace 1270 Aberdeen Hawkesbury ON K6A1K7 CA		FX 18 Compliant FedEx® Express CAFE3009	
Two completed and signed copies of this Declaration must be handed to the operator		WARNING Failure to comply with all respects with the applicable Dangerous Goods Regulations may be in breach of the applicable law, subject to legal penalties.	
TRANSPORT DETAILS			
This shipment is within the limitations prescribed for: (delete non applicable)	Airport of Departure VISTA		
PASSENGER AND CARGO AIRCRAFT			
Airport of Destination: Hawkesbury NZYMXA		Shipment type: (delete non applicable) NON-RADIOACTIVE	
NATURE AND QUANTITY OF DANGEROUS GOODS UN Number or identification Number, proper shipping name, Class or Division (subsidiary risk), packing group (if required), and all other required information. UN 1046, Helium, compressed, 2.2//2 PLYWOOD BOX X 0.3 kg//200			
Additional Handling Information FOR CHEMICAL EMERGENCY CALL INFOTRAC, ID# 73918			
I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labelled/placarded, and are in all respects in proper condition for transport according to applicable International and National Governmental Regulations. I declare that all of the applicable air transport requirements have been met.		Name/Title of Signatory JEAN EVERETTE/SHIPPING Place and Date VISTA, CA 01/26/2017 Signature JEAN EVERETTE (see warning above) 	
3523233500 Emergency Telephone Number			
FOR RADIOACTIVE MATERIAL SHIPMENT ACCEPTABLE FOR PASSENGER AIRCRAFT, THE SHIPMENT CONTAINS RADIOACTIVE MATERIAL INTENDED FOR USE IN OR INCIDENT TO RESEARCH, MEDICAL DIAGNOSIS OR TREATMENT. ADR EUROPEAN TRANSPORT STATEMENT: CARRIAGE IN ACCORDANCE WITH 1.1.4.2.1			

Apical Industries, Inc. dba Dart Aerospace

Packing List

3030 Enterprise Court, Suite A
Vista, CA 92081
760-724-5300

No: 19627

Bill To:

Ship To:

DART AEROSPACE LTD
1270 ABERDEEN STREET
HAWKESBURY, ON K6A 1K7

DART AEROSPACE LTD
1270 ABERDEEN STREET
HAWKESBURY, ON, CANADA K6A 1K7
CUST PO# 4801387793/REF#SO128956

Customer PO	Ship Date	Order Date	Tracking Number
PO34722	1/26/2017	1/26/2017	62435997 599/5577

Part No.	Description	Serial Number	Cond	Qty	Qty B/O
650.4704	RESERVOIR ASSY (3G2560V01951)	17001 ✓	NE	1 ✓	0
600.1400	GRAPH LABEL (3G2560V01551)	✓	NE	2 ✓	0
650.4904	PULL CABLE ASSY (3G2560V01851)	16006 ✓ 16007 ✓	NE	2 ✓	0
650.4703	RESERVOIR ASSY (3G2560V01251)	17001 ✓	NE	1 ✓	0
650.8804	PILOT HANDLE ASSY (3G2560V01731)	16006 ✓ 16007 ✓	NE	2 ✓	0
650.8803	BACK-UP HANDLE AND CABLE ASSY (3G2560V01451)	16006 ✓ 16007 ✓	NE	2 ✓	0
650.5801	PULL CABLE JUNCTION ASSY (3G2560V01451)	✓	NE	2 ✓	0

S-f

JAN 27 2017

Condition: NE - New

Apical Industries, Inc. dba Dart Aerospace

CERTIFICATE OF CONFORMITY

3030 Enterprise Court Suite A
Vista, CA 92081
760-724-5300

SITA
ORIGINAL

Shipping Order No: 19627

Bill To:

DART AEROSPACE LTD
1270 ABERDEEN STREET
HAWKESBURY, ON K6A 1K7

Ship To:

DART AEROSPACE LTD
1270 ABERDEEN STREET
HAWKESBURY, ON, CANADA K6A 1K7
CUST PO# 4801387793/REF#SO128956

Customer PO

Ship Date

Order Date

PO34722

1/26/2017

1/26/2017

Part No.	Description	Serial Number	Cond	Qty	SL	Control #
650.4704	RESERVOIR ASSY (3G2560V01951)	17001	NE	1	11	182646-1
600.1400	GRAPH LABEL (3G2560V01551)		NE	2	7	182566-1
650.4904	PULL CABLE ASSY (3G2560V01851)	16006	NE	1	25	182663-1
650.4904	PULL CABLE ASSY (3G2560V01851)	16007	NE	1	26	182663-2
650.4703	RESERVOIR ASSY (3G2560V01251)	17001	NE	1	23	182648-1
650.8804	PILOT HANDLE ASSY (3G2560V01731)	16006	NE	1	23	182662-1
650.8804	PILOT HANDLE ASSY (3G2560V01731)	16007	NE	1	24	182662-2
650.8803	BACK-UP HANDLE AND CABLE ASSY (3G2560V02031)	16006	NE	1	23	182674-1
650.8803	BACK-UP HANDLE AND CABLE ASSY (3G2560V02031)	16007	NE	1	24	182675-1
650.5801	PULL CABLE JUNCTION ASSY (3G2560V01451)		NE	1	26	169708-3
650.5801	PULL CABLE JUNCTION ASSY (3G2560V01451)		NE	1	27	178833-3

9-88
JAN 27 2017

This is to certify that the items identified herein have been manufactured, assembled, inspected and/or tested in accordance with all Apical Industries, Inc. applicable specifications, drawings and other purchase order requirements.

Signed:

For and on behalf of Apical Industries, Inc.

Quality Assurance



Inspector's Stamp:



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO34722**

Purchase Order Date 12/21/2016

PO Print Date 1/27/2017

Page Number 1 of 3

Order From :
APICAL INDUSTRIES
3030 ENTREPRISE COURT SUITE A
VISTA, CA 92081-8347
USA

VU-API001

Ship To : DART AEROSPACE LTD.
1270 ABERDEEN STREET
HAWKESBURY,, ON K6A 1K7
CANADA

Contact Name
Vendor Phone 760 509 1615

Ship To Contact CAITLIN/PAT SMITH
Ship To Phone 613-632-3336
Ship Via: See comments below
Ship Acct:

Buyer Chantal Chartrand
Customer POID 4801387793 / REF#SO128956
Customer Tax #
Terms Net 30
Currency USD
FOB EXW - (Ex Works)

Line Nbr	Reference Vendor Part Number Line Comments Delivery Comments	Description/ Mfg ID	Req Date/ Taxable Promise Date	CD	Req Qty/ Unit of Measure	List Price	Disc %	Discounted Unit Price	Extended Price
1	650.4704	RH Liferaft Reservoir (3G2560V01951)	1/25/2017	FN	1.00 No Each	\$3,570.00	0.00%	\$3,570.00	\$3,570.00
	* ALL AIRWORTHY PRODUCTS REQUIRE AN FAA 8130-3 AND / OR C OF C * LATEST REVISION PROVIDED UNLESS OTHERWISE REQUESTED LINE ITEM 20 REV C								
			1/25/2017						
Line Total:									\$3,570.00
2	600.1400	LR Reservoir Pressure Chart (3G2560V01551)	1/25/2017		2.00 No Each	\$90.00	0.00%	\$90.00	\$180.00
	LINE ITEM 30 REV A								
			1/25/2017						
Line Total:									\$180.00

JAN 27 2017

PO Instructions: PAT SMITH / CAITLIN - SHIPPING ON DART VISTA'S ACCOUNT

Note:

1/27/2017



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO34722**

Purchase Order Date 12/21/2016

PO Print Date 1/27/2017

Page Number 2 of 3

Order From :
APICAL INDUSTRIES
3030 ENTREPRISE COURT SUITE A
VISTA, CA 92081-8347
USA

VU-API001

Ship To : DART AEROSPACE LTD.
1270 ABERDEEN STREET
HAWKESBURY,, ON K6A 1K7
CANADA

Contact Name

Vendor Phone 760 509 1615

Ship To Contact CAITLIN/PAT SMITH

Ship To Phone 613-632-3336

Ship Via: See comments below

Ship Acct:

Buyer

Customer POID 4801387793 / REF#SO128956

Customer Tax #

Terms Net 30

Currency USD

FOB EXW - (Ex Works)

3	650.4904	Inflation System Activation Cable (3G2560V01851)	1/25/2017	FN	2.00	\$306.00	0.00%	\$306.00	\$612.00
			No		Each				
			1/25/2017						

LINE ITEM 80
REV B

Line Total: \$612.00

4	650.4703	LH Liferaft Reservoir (3G2560V01251)	1/25/2017	FN	1.00	\$3,570.00	0.00%	\$3,570.00	\$3,570.00
			No		Each				
			1/25/2017						

LINE ITEM 10
REV C

Line Total: \$3,570.00

6	650.5801 (3G2560V01451)	Junction Box (3G2560V01451)	1/25/2017	FN	2.00	\$750.00	0.00%	\$750.00	\$1,500.00
			No		Each				
			1/25/2017						

LINE ITEM 60
REV C

JAN 27 2017

PO Instructions: PAT SMITH / CAITLIN - SHIPPING ON DART VISTA'S ACCOUNT

Note:

1/27/2017



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO34722**

Purchase Order Date 12/1/2016

PO Print Date 1/21/2017

Page Number 3 of 3

Order From :

VU-API001

Ship To : DART AEROSPACE LTD.

1270 ABERDEEN STREET
HAWKESBURY,, ON K6A 1K7
CANADA

APICAL INDUSTRIES
3030 ENTREPRISE COURT SUITE A
VISTA, CA 92081-8347
USA

Contact Name

Vendor Phone 760 509 1615

Ship To Contact CAITLIN/PAT SMITH

Ship To Phone 613-632-3336

Ship Via: See comments below

Ship Acct:

Buyer

Chantal Chartrand

Customer POID

4801387793 / REF#SO128956

Customer Tax #

Terms

Net 30

Currency

USD

FOB

EXW - (Ex Works)

Line Total: \$1,500.00

7	650.8804	Pilot Handle and Cable Assembly (3G2560V01731)	1/25/2017	FN	2.00	\$1,000.00	0.00%	\$1,000.00	\$2,000.00
			No		Each				
			1/25/2017						

LINE ITEM 70
DRAWING EXPONENT A

Line Total: \$2,000.00

8	650.8803	Backup Handle and Cable Assembly (3G2560V02031)	1/25/2017	FN	2.00	\$810.00	0.00%	\$810.00	\$1,620.00
			No		Each				
			1/25/2017						

LINE ITEM 100
DRAWING EXPONENT A

Line Total: \$1,620.00

JAN 27 2017

PO Total: \$13,052.00

PO Instructions: PAT SMITH / CAITLIN - SHIPPING ON DART VISTA'S ACCOUNT

Note: Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Change Nbr: 5

Change Date: 1/27/2017

Helium, compressed

Safety Data Sheet P-4602

according to U.S. Code of Federal Regulations 29 CFR 1910.1200, Hazard Communication.
Date of issue: 01/01/1979 Revision date: 09/30/2014 Supersedes: 12/01/2007

SECTION 1: Product and company identification

1.1. Product identifier

Product form : Substance
Name : Helium, compressed
CAS No : 7440-59-7
Formula : He
Other means of identification : Helium-4, refrigerant gas R-704, LaserStar Helium, Medipure Helium, UltraLift Helium

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Industrial use
Medical applications.

1.3. Details of the supplier of the safety data sheet

Praxair, Inc.
39 Old Ridgebury Road
Danbury, CT 06810-5113 - USA
T 1-800-772-9247 (1-800-PRAXAIR) - F 1-716-879-2146
www.praxair.com

1.4. Emergency telephone number

Emergency number : Onsite Emergencies: 1-800-645-4633
CHEMTREC: USA 1-800-424-9300, International 001-703-527-3887 (Collect calls accepted, contract 17729)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (GHS-US)
Compressed gas H280

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US)



GHS04

Signal word (GHS-US) : Warning
Hazard statements (GHS-US) : H280 - CONTAINS GAS UNDER PRESSURE; MAY EXPLODE IF HEATED
OSHA-H01 - MAY DISPLACE OXYGEN AND CAUSE RAPID SUFFOCATION.
Precautionary statements (GHS-US) : P202 - Do not handle until all safety precautions have been read and understood
P271+P403 - Use and store only outdoors or in a well-ventilated place.
CGA-PG05 - Use a back flow preventive device in the piping.
CGA-PG10 - Use only with equipment rated for cylinder pressure.
CGA-PG06 - Close valve after each use and when empty.
CGA-PG02 - Protect from sunlight when ambient temperature exceeds 52°C (125°F).

2.3. Other hazards

Other hazards not contributing to the classification : Asphyxiant in high concentrations.

2.4. Unknown acute toxicity (GHS-US)

No data available

SECTION 3: Composition/information on ingredients

3.1. Substance

Helium, compressed

Safety Data Sheet

according to U.S. Code of Federal Regulations 29 CFR 1910.1200, Hazard Communication.

6.4. Reference to other sections

See also sections 8 and 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling

: Wear leather safety gloves and safety shoes when handling cylinders. Protect cylinders from physical damage; do not drag, roll, slide or drop. While moving cylinder, always keep in place removable valve cover. Never attempt to lift a cylinder by its cap; the cap is intended solely to protect the valve. When moving cylinders, even for short distances, use a cart (trolley, hand truck, etc.) designed to transport cylinders. Never insert an object (e.g., wrench, screwdriver, pry bar) into cap openings; doing so may damage the valve and cause a leak. Use an adjustable strap wrench to remove over-tight or rusted caps. Slowly open the valve. If the valve is hard to open, discontinue use and contact your supplier. Close the container valve after each use; keep closed even when empty. Never apply flame or localized heat directly to any part of the container. High temperatures may damage the container and could cause the pressure relief device to fail prematurely, venting the container contents. For other precautions in using this product, see section 16.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions

: Store in a cool, well-ventilated place. Store and use with adequate ventilation. Store only where temperature will not exceed 125°F (52°C). Firmly secure containers upright to keep them from falling or being knocked over. Install valve protection cap, if provided, firmly in place by hand. Store full and empty containers separately. Use a first-in, first-out inventory system to prevent storing full containers for long periods.

OTHER PRECAUTIONS FOR HANDLING, STORAGE, AND USE: When handling product under pressure, use piping and equipment adequately designed to withstand the pressures to be encountered. Never work on a pressurized system. Use a back flow preventive device in the piping. Gases can cause rapid suffocation because of oxygen deficiency; store and use with adequate ventilation. If a leak occurs, close the container valve and blow down the system in a safe and environmentally correct manner in compliance with all international, federal/national, state/provincial, and local laws; then repair the leak. Never place a container where it may become part of an electrical circuit.

7.3. Specific end use(s)

None.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Helium, compressed (7440-59-7)	
ACGIH	Not established
USA OSHA	Not established

8.2. Exposure controls

Appropriate engineering controls

: Oxygen detectors should be used when asphyxiating gases may be released. Systems under pressure should be regularly checked for leakages. Provide adequate general and local exhaust ventilation. Consider work permit system e.g. for maintenance activities.

Hand protection

: Wear working gloves when handling gas containers.

Eye protection

: Wear safety glasses with side shields.

Respiratory protection

: Self contained breathing apparatus (SCBA) or positive pressure airline with mask are to be used in oxygen-deficient atmospheres.

Thermal hazard protection

: None necessary.

Environmental exposure controls

: None necessary.

Other information

: Wear safety shoes while handling containers.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state

: Gas

Appearance

: Colorless gas.

Molecular mass

: 4 g/mol

09/30/2014

EN (English US)

SDS ID: P-4602

3/8

Helium, compressed

Safety Data Sheet

according to U.S. Code of Federal Regulations 29 CFR 1910.1200, Hazard Communication.

Acute toxicity	: Not classified
Skin corrosion/irritation	: Not classified pH: Not applicable.
Serious eye damage/irritation	: Not classified pH: Not applicable.
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified No known effects from this product.
Aspiration hazard	: Not classified Not applicable.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : No ecological damage caused by this product.

12.2. Persistence and degradability

Helium, compressed (7440-59-7)

Persistence and degradability	No ecological damage caused by this product.
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12.3. Bioaccumulative potential

Helium, compressed (7440-59-7)

Log Pow	Not applicable.
Log Kow	Not applicable.
Bioaccumulative potential	No ecological damage caused by this product.

12.4. Mobility in soil

Helium, compressed (7440-59-7)

Mobility in soil	No data available.
Ecology - soil	No ecological damage caused by this product.

12.5. Other adverse effects

Effect on ozone layer : None.

Effect on the global warming : None.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods	: May be vented to atmosphere in a well ventilated place. Consult supplier for specific recommendations. Do not discharge into any place where its accumulation could be dangerous. Contact supplier if guidance is required.
Waste disposal recommendations	: Dispose of contents/container in accordance with local/regional/national/international regulations. Contact supplier for any special requirements.

SECTION 14: Transport information

In accordance with DOT	
Transport document description	: UN1046 Helium, compressed, 2.2
UN-No.(DOT)	: UN1046
Proper Shipping Name (DOT)	: Helium, compressed

Helium, compressed

Safety Data Sheet

according to U.S. Code of Federal Regulations 29 CFR 1910.1200, Hazard Communication.

EU-Regulations

Helium, compressed (7440-59-7)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Compressed gas H280

Full text of H-phrases: see section 16

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

Not classified

15.2.2. National regulations

Helium, compressed (7440-59-7)

Listed on AICS (Australian Inventory of Chemical Substances)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)

Listed on the Korean ECL (Existing Chemicals List)

Listed on NZIoC (New Zealand Inventory of Chemicals)

Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

15.3. US State regulations

Helium, compressed(7440-59-7)

State or local regulations

U.S. - Massachusetts - Right To Know List

U.S. - New Jersey - Right to Know Hazardous Substance List

U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

Revision date

: 9/30/2014 12:00:00 AM

Other information

: When you mix two or more chemicals, you can create additional, unexpected hazards. Obtain and evaluate the safety information for each component before you produce the mixture. Consult an industrial hygienist or other trained person when you evaluate the end product. Before using any plastics, confirm their compatibility with this product.

Praxair asks users of this product to study this SDS and become aware of the product hazards and safety information. To promote safe use of this product, a user should (1) notify employees, agents, and contractors of the information in this SDS and of any other known product hazards and safety information, (2) furnish this information to each purchaser of the product, and (3) ask each purchaser to notify its employees and customers of the product hazards and safety information.

The opinions expressed herein are those of qualified experts within Praxair, Inc. We believe that the information contained herein is current as of the date of this Safety Data Sheet. Since the use of this information and the conditions of use are not within the control of Praxair, Inc., it is the user's obligation to determine the conditions of safe use of the product.

Praxair SDSs are furnished on sale or delivery by Praxair or the independent distributors and suppliers who package and sell our products. To obtain current SDSs for these products, contact your Praxair sales representative, local distributor, or supplier, or download from www.praxair.com. If you have questions regarding Praxair SDSs, would like the document number and date of the latest SDS, or would like the names of the Praxair suppliers in your area, phone or write the Praxair Call Center (Phone: 1-800-PRAXAIR/1-800-772-9247 Address: Praxair Call Center, Praxair, Inc., P.O. Box 44, Tonawanda, NY 14151-0044).

PRAXAIR and the Flowing Airstream design are trademarks or registered trademarks of Praxair Technology, Inc. in the United States and/or other countries.

Full text of H-phrases: see section 16:

Compressed gas	Gases under pressure Compressed gas
H280	CONTAINS GAS UNDER PRESSURE; MAY EXPLODE IF HEATED

July 14, 2016



U.S. Department
of Transportation

East Building, PHH-30
1200 New Jersey Avenue S.E.
Washington, D.C. 20590

**Pipeline and Hazardous
Materials Safety Administration**

DOT-SP 16108
(SECOND REVISION)

EXPIRATION DATE: June 30, 2020

(FOR RENEWAL, SEE 49 CFR § 107.109)

1. GRANTEE: Carleton Technologies Inc.
Westminster, MD
2. PURPOSE AND LIMITATIONS:
 - a. This special permit authorizes the manufacture, mark, sale and use of non-DOT specification fully wrapped carbon-fiber reinforced, aluminum-lined composite cylinders conforming with ISO Standard 11119-2, except as specified herein, for the transportation in commerce of Division 2.1 and 2.2 hazardous materials. This special permit provides no relief from the Hazardous Materials Regulations (HMR) other than as specifically stated herein. The most recent revision supersedes all previous revisions.
 - b. The safety analyses performed in development of this special permit only considered the hazards and risks associated with transportation in commerce. The safety analyses did not consider the hazards and risks associated with consumer use, use as a component of a transport vehicle or other device, or other uses not associated with transportation in commerce.
3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171-180.
4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR § 173.302a(a)(1), 173.304a(a)(1) and 180.205, in that non-DOT specification cylinders are not authorized, except as provided herein.

July 14, 2016

5. BASIS: This special permit is based on the application of Carleton Technologies Inc. dated June 11, 2016 submitted in accordance with § 107.109.
6. HAZARDOUS MATERIALS (49 CFR § 172.101):

Hazardous Material Description			
Proper Shipping Name	Hazard Class/ Division	Identification Number	Packing Group
Air, compressed	2.2	UN1002	N/A
Argon, compressed	2.2	UN1006	N/A
Carbon dioxide	2.2	UN1013	N/A
Compressed gas, n.o.s.	2.2	UN1956	N/A
Compressed gas, oxidizing, n.o.s.	2.2	UN3156	N/A
Helium, compressed	2.2	UN1046	N/A
Heptafluoropropane or Refrigerant gas R 227	2.2	UN3296	N/A
Hydrogen, compressed	2.1	UN1049	N/A
Liquefied gas, oxidizing, n.o.s.	2.2	UN3157	N/A
Methane, compressed or Natural gas, compressed (with high methane content)	2.1	UN1971	N/A
Nitrogen, compressed	2.2	UN1066	N/A
Nitrous oxide	2.2	UN1070	N/A
Oxygen, compressed	2.2	UN1072	N/A
Pentafluoroethane or Refrigerant gas R 125	2.2	UN3220	N/A

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7. SAFETY CONTROL MEASURES:

a. PACKAGING - Prescribed packaging is a non-DOT specification fully wrapped, carbon-fiber reinforced 6161-T6 aluminum lined cylinder. Cylinders are limited to a maximum water volume of 315 Liters (19,223 cubic inches), and a service pressure of 517 bar (7,500 psig). Cylinders must be manufactured and marked in conformance with ISO 11119-2 Standard: 2002 ("Gas cylinders of composite construction - Specification and test methods - Part 2: Fully wrapped fibre reinforced composite gas cylinders with load sharing metal liners") except that:

Section 6.2.2 The resin system must be tested on a sample coupon representative of the composite overwrap in accordance with ASTM D-2344-89 for water boil shear test. The minimum shear strength may not be less than 34,474 kPa (5000 psi).

Section 7.2.4 c) The working pressure, p_w (if applicable and which shall not exceed test pressure $\times 3/5$)

b. TESTING - The cylinders must be tested in accordance with the ISO 11119-2 prototype design requirements except that:

Section 8.2.1 Cylinder lot for qualification testing shall represent minimum number of cylinders needed to complete testing. Spare cylinders may be included in the lot at the manufacturer's discretion.

Section 8.2.2 Not applicable

Section 8.2.7 Except for the cases identified in 8.2.8, the inspector shall supervise the following tests on the cylinders selected:

a) hydraulic proof pressure test, in accordance with 8.5.1 or, hydraulic volumetric expansion test, in accordance with 8.5.2;

b) burst test, in accordance with 8.5.4

c) ambient cycle test, in accordance with 8.5.5;

d) environmental cycle test, in accordance with 8.5.6;

e) flaw test, in accordance with 8.5.7 except: "The flaw shall be made with a 1mm thick cutter to a depth equal to at least 50% of the composite thickness but no greater than 2,5 mm deep, and to a length between the centers of the cutter equal to five times the composite thickness.";

f) drop test, in accordance with 8.5.8;

g) high velocity impact (gunfire) test, in accordance with 8.5.9

h) fire resistance test, if a pressure relief device is fitted to prevent failure in case of a fire in service, in accordance with 8.5.10;

i) salt water immersion test, in accordance with 8.5.11;

j) torque test, in accordance with 8.5.12;

k) high temperature creep test, in accordance with 8.5.13.

Section 8.5.3 *Liner burst test* - Not required.

Section 8.5.4 *Cylinder burst test*. The minimum required burst pressure is 3.4 times the service pressure marked on the cylinder. A minimum of three cylinders must be hydrostatically tested in accordance with the following:

(1) Procedure: Pressurize each cylinder at a uniform rate up to 3.4 times the marked service pressure, and hold at that pressure for a minimum of 60 seconds. The rate of pressurization may not exceed 1,379 kPa (200 psi) per second. Increase the pressure to failure and record the pressure at the onset of failure. Cylinders used in the ambient temperature cycling test may be used for the burst test.

(2) Acceptable test results: In no case may the burst pressure of any cylinder be less than the required minimum burst pressure. The failure initiation must be in the cylindrical part of the

cylinders.

Section 8.5.5 *Ambient cycle test.* At a minimum, two cylinders must be subjected to cycling pressurization tests in accordance with the following:

(1) Procedure: Pressurize the cylinder between a pressure not greater than 10 percent of service pressure and the service pressure at a rate not to exceed 10 cycles per minute. The minimum dwell time in the pressure range between 90 and 100 percent of the service pressure may not be less than 1.2 seconds. Each cylinder must be subjected to a minimum of 10,000 cycles. Following the cycling test to service pressure, each cylinder must be subjected to a minimum of 30 pressurization cycles by pressurizing between approximately zero and the minimum required test pressure. The dwell time between 90 and 100 percent of the maximum test pressure may not be less than 1.2 seconds.

(2) Acceptable test results: Each test cylinder must withstand the cycling pressurization test without any evidence of visually observable damage, distortion or leakage. After successfully passing the cycling test, the cylinder must be burst tested in accordance with the procedure in Section 8.5.4(1) of this special permit. The residual burst strength of the cylinder must be at least 90 percent of the required minimum burst pressure (3.06 times service pressure).

Section 8.5.6 *Environmental cycle test.* Two cylinders shall be cycle tested in accordance with the following:

(1) Procedure: The cycling rate may not exceed 10 cycles per minute. The dwell time between 90 and 100 percent of the maximum test pressure may not be less than 1.2 seconds.

Step 1: Cycle test at ambient temperature by pressurizing from approximately zero pressure to service pressure for 10,000 cycles.

Step 2: Pressurize and maintain the cylinder at service pressure and subject the cylinder

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to a minimum of 20 thermal cycles at each temperature of 93.3°C (200°F) and minus 51.6°C (minus 60°F) maintaining the dwell time at each extreme temperature to a minimum of 10 minutes.

Step 3: After successfully passing the cycling test, the cylinder shall be burst tested in accordance with the procedure in Section 8.5.4 of this special permit.

(2) Acceptable test results: The test cylinder must withstand the thermal cycling test without any evidence of visually observable damage, distortion or leakage. In addition, the residual burst strength of the cylinder must be at least 90 percent of the required minimum burst pressure (3.06 times service pressure).

Section 8.5.8 Drop Test. At a minimum, one empty cylinder, complete with valve (or equivalent) but uncharged must be subjected to a drop test from a height of 3 meters (10 feet) onto a concrete surface in accordance with the following:

(1) Procedure:

Drop 1: The cylinder shall be dropped vertically onto the end.

Drop 2: The cylinder shall be dropped horizontally onto the sidewall.

Drop 3: The cylinder shall be dropped horizontally onto a 3.8 x 0.48 cm (1 ½ x 3/16 inch) piece of angle iron, with the included angle in the downward position. The cylinder shall land at right angles to and on the heel edge of the angle iron, impacting approximately in the center of the sidewall.

(2) Acceptable results:

If one cylinder tested: The cylinder must be subjected to 1,000 pressure cycles from not greater than 10 percent of service pressure and the service pressure at a rate not to exceed 10 cycles per minute. The minimum dwell time in the pressure range between 90 and 100 percent of the service pressure may not be less than 1.2 seconds. The test cylinder must withstand the cycling

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pressurization test without any evidence of visually observable leakage or damage growth during or after the pressure cycle test. After successfully passing the cycling test, the cylinder must be burst tested in accordance with the procedure described in 8.5.4. The residual burst strength of the cylinder must be at least 90 percent of the required minimum burst pressure (3.06 times service pressure). The cycling and burst pressure test data must be submitted to the DOT for the information database. The failure initiation does not have to be in the cylindrical part of the cylinder.

If two cylinders are tested: One cylinder must be subjected to 1,000 pressure cycles from not greater than 10 percent of service pressure and the service pressure at a rate not to exceed 10 cycles per minute. The minimum dwell times in the pressure range between 90 and 100 percent of the service pressure may not be less than 1.2 seconds. The test cylinder must withstand the cycling pressurization test without any evidence of visually observable leakage or damage growth during or after the pressure cycle test. After successfully passing the cycling test, the cylinder must be burst tested. The rate of pressurization may not exceed 1,379 kPa (200 psi) per second. Increase the pressure to failure and record the pressure at the onset of failure. The burst pressure must be recorded. The other cylinder must be burst tested in accordance with the procedure described in 8.5.4. The residual burst strength of the cylinder must be at least 90 percent of the required minimum burst pressure (3.06 times service pressure). The cycling and burst pressure test data for both cylinders must be submitted to the DOT for the information database. The failure initiation does not have to be in the cylindrical part of the cylinders.

Section 8.5.9 High velocity impact(gunfire) test. One cylinder must be tested in accordance with the following:

- (1) Procedure: The cylinder must be charged with air or nitrogen to service pressure and shall be impacted by a 0.30 caliber armor piercing

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projectile having a velocity of about 853.4 meters (2800 feet) per second. The cylinder shall be positioned in such a way that the impact point shall be in the cylinder sidewall at an angle of 45° to the longitudinal axis of the cylinder and aimed to exit the sidewall on the opposite side of the cylinder. The distance from the firing location to the cylinder may not exceed 45.7 meters (150 feet).

(2) **Acceptable test results:** The cylinder shall not fail by fragmentation. The approximate size of the entrance and exit penetrations shall be recorded.

Section 8.5.10 Fire resistance test.

Two cylinders must be tested in accordance with the following:

(1) **Procedure:** Cylinders are to be equipped with a valve fitted with a bursting disc in compliance with the requirements in 49 CFR 173.301(f). Cylinders must be charged with nitrogen or air to service pressure. The required bonfire test procedure shall be in accordance with the Compressed Gas Association (CGA) Pamphlet CGA C-14-1992. The test shall be performed with the cylinder placed in an upright position. The cylinder shall be exposed to fire until the contents are fully vented.

(2) **Acceptable test results:** The venting of the gas must be predominantly through the pressure relief device. Cylinders must be intact at the completion of venting.

Section 8.5.11 Salt water immersion test - Not required.

Section 8.5.12 Torque test. The torque test is not required. However:

(1) Threads must be clean cut, even, without checks, and must be designed in compliance with the requirements of the Federal Standard FED-STD-H28, Appendix A5.

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(2) Tapered threads are not permitted.

(3) Straight threads having at least 6 threads must have a calculated factor of safety in shear of at least 10 at the test pressure for the cylinder. The threads must extend completely through the neck.

Section 8.5.13 *High temperature creep test* - Not required.

c. BATCH TESTING -

Section 9.1.2 The liner hardness test is not required.

Section 9.1.3 The liner burst test is not required.

Section 9.4.5 One cylinder (randomly selected) from each lot of completed cylinders must be subjected to cyclic pressurization testing in accordance with the following:

(A) Procedure: The cylinder shall be cycled to service pressure in accordance with 8.5.5 of this special permit. Adequate recording instrumentation must be provided if the test is expected to run unattended for any period of time exceeding two hours.

(B) Acceptable test results: Test results must be in accordance with 8.5.5 of this special permit.

Section 9.5.1 In the event of failure to meet test requirements either during a production run (batch test) or when design type approval tests do not give satisfactory results, an investigation into the cause of failure and re-testing shall be carried out. When a cylinder fails a batch acceptance test, five additional cylinders selected randomly may be subjected to the same test. If all five cylinders pass, the lot may be accepted. If one or more of the cylinders fails, the lot must be rejected.

d. MARKING - The cylinders must be marked in accordance with 49 CFR § 178.71(p) except that the marking must contain the special permit number "DOT-SP 16108" in lieu of the ISO Standard. Except cylinder weight is not required to be marked on the cylinder.

e. REQUALIFICATION - Cylinders must be reinspected and hydrostatically retested at least once every five years. Testing must be performed in accordance with §180.205, tested to 5/3 of the marked service pressure and the latest edition of CGA Pamphlet C-6.2 "Guidelines for Visual Inspection and Re-qualification of Fiber Reinforced High Pressure Cylinders", except as specifically noted herein:

(1) Cylinders must be volumetrically tested by the water jacket method suitable for the determination of the cylinder expansion for a minimum test time of one minute.

(2) Reinspection markings must be applied on a label securely affixed to the cylinder and over-coated with epoxy, near the original test date. Metal stamping of the composite is prohibited. Reheat treatment of rejected cylinders is not authorized.

(3) Cylinders with fiber damage (cuts, abrasions, etc.) that exceeds Level 1 type damage as defined in CGA Pamphlet C-6.2 and meet the following depth and length criteria are considered to have Level 2 damage:

(i) Depth - Damage that upon visual inspection is seen to penetrate the outer fiberglass layer but does not expose the carbon layer beneath, or that has a measured depth of greater than 0.005 inch and less than 0.045 inch for cylinders with an outside diameter greater than 7.5 inches or less than 0.035 inch for cylinders 7.5 inches or less in outside diameter;

(ii) Length - Damage that has a maximum allowable length of:

Region	Direction of fiber damage	Maximum length of damage
Cylinder sidewall and domes	Transverse to fiber direction (longitudinal direction)	20% of the straight sidewall section length
Cylinder sidewall and domes	In fiber direction (circumferential direction)	20% of the straight sidewall section length

(4) Cylinders with damage that meets the Level 2 criteria must be rejected. Retesters must contact the cylinder manufacturer in the event that the damage cannot be clearly interpreted based on these criteria. Repair of rejected cylinders is authorized for Level 2 type damage. Repairs must be made in accordance with CGA Pamphlet C-6.2, prior to the hydrostatic pressure test. Repairs must be evaluated after the hydrostatic test.

(5) Cylinders that have direct fiber damage that penetrates through the outer fiberglass layer and into the carbon layer, or that have a measured damage depth of greater than the Level 2 maximum are considered to have Level 3 type damage. Cylinders that have damage with depth meeting Level 2, but length exceeding the Level 2 maximum, are considered to have Level 3 type damage. Cylinders with Level 3 type damage are not authorized to be repaired, and must be condemned.

(6) Persons who perform inspection and testing of cylinders subject to this special permit must comply with § 180.205(b) and with all the terms and conditions of this special permit.

(7) Hydrostatic retest may be repeated as provided for in §180.205(g), only two such retests are permitted. Pressurization prior to the official hydrostatic test for the purpose of a systems check must not exceed 85% of the minimum required test pressure.

f. OPERATIONAL CONTROLS -

(1) Cylinders manufactured under this special permit are not authorized for use in underwater applications.

(2) Any cylinder exhibiting evidence of fire or excessive heat damage may not be retested under the terms of this special permit.

(3) Cylinders manufactured under this special permit are not authorized for use fifteen (15) years after the date of manufacture.

(4) Transportation of oxygen is only authorized when in accordance with § 175.501.

(5) Cylinders must be packaged in accordance with § 173.301(a)(9).

8. SPECIAL PROVISIONS:

a. In accordance with the provisions of Paragraph (b) of § 173.22a, persons may use the packaging authorized by this special permit for the transportation of the hazardous materials specified in paragraph 6, only in conformance with the terms of this special permit.

b. A person who is not a holder of this special permit, but receives a packaging covered by this special permit, may reoffer it for transportation provided no modification or change is made to the packaging and it is offered for transportation in conformance with this special permit and the HMR.

c. A current copy of this special permit must be maintained at each facility where the package is offered or reoffered for transportation.

d. Each packaging manufactured under the authority of this special permit must be either (1) marked with the name of the manufacturer and location (city and state) of the facility at which it is manufactured or (2) marked with a registration symbol designated by the Office of Hazardous Materials Special Permits and Approvals for a specific manufacturing facility.

e. A current copy of this special permit must be maintained at each facility where the packaging is manufactured under this special permit. It must be made available to a DOT representative upon request.

9. MODES OF TRANSPORTATION AUTHORIZED: Motor Vehicle, Cargo aircraft, Cargo Vessel, Passenger-carrying aircraft for military applications only, Rail Freight.

10. MODAL REQUIREMENTS: A current copy of this special permit must be carried aboard each cargo vessel, aircraft or motor vehicle used to transport packages covered by this special permit. The shipper must furnish a copy of this special permit to the air carrier before or at the time the shipment is tendered.

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11. COMPLIANCE: Failure by a person to comply with any of the following may result in suspension or revocation of this special permit and penalties prescribed by the Federal hazardous materials transportation law, 49 U.S.C. 5101 et seq:

- o All terms and conditions prescribed in this special permit and the Hazardous Materials Regulations, 49 CFR Parts 171-180.
- o Persons operating under the terms of this special permit must comply with the security plan requirement in Subpart I of Part 172 of the HMR, when applicable.
- o Registration required by § 107.601 et seq., when applicable.

Each "Hazmat employee", as defined in § 171.8, who performs a function subject to this special permit must receive training on the requirements and conditions of this special permit in addition to the training required by §§ 172.700 through 172.704.

No person may use or apply this special permit, including display of its number, when this special permit has expired or is otherwise no longer in effect.

Under Title VII of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU)—"The Hazardous Materials Safety and Security Reauthorization Act of 2005" (Pub. L. 109-59), 119 Stat. 1144 (August 10, 2005), amended the Federal hazardous materials transportation law by changing the term "exemption" to "special permit" and authorizes a special permit to be granted up to two years for new special permits and up to four years for renewals.

12. REPORTING REQUIREMENTS: Shipments or operations conducted under this special permit are subject to the Hazardous Materials Incident Reporting requirements specified in 49 CFR §§ 171.15 Immediate notice of certain hazardous materials incidents, and 171.16 Detailed hazardous materials

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incident reports. In addition, the grantee(s) of this special permit must notify the Associate Administrator for Hazardous Materials Safety, in writing, of any incident involving a package, shipment or operation conducted under terms of this special permit.

Issued in Washington, D.C.:



for Dr. Magdy El-Sibaie
Associate Administrator for Hazardous Materials Safety

Address all inquiries to: Associate Administrator for Hazardous Materials Safety, Pipeline and Hazardous Material Safety Administration, U.S. Department of Transportation, East Building PHH-30, 1200 New Jersey Avenue, Southeast, Washington, D.C. 20590.

Copies of this special permit may be obtained by accessing the Hazardous Materials Safety Homepage at http://hazmat.dot.gov/sp_app/special_permits/spec_perm_index.htm Photo reproductions and legible reductions of this special permit are permitted. Any alteration of this special permit is prohibited.

PO: CWFreeman/SG



ACI-624359975599

Commercial Invoice ECI

Invoice Number	Purpose of Shipment	Curr	Ult Dest.	Air Waybill Nbr.
Export Dt	C.I. References	USD	CA	624359975599
1/26/2017	PO34722	Pkgs	Bill T/C	Bill D/T/F
		1	1985-4949-5	1985-4949-5
		OTH		

Shipper:	Consignee:
JEAN EVERETTE	Caitlin/Pat Smith
APICAL INDUSTRIES, INC. dba	Dart Aerospace Ltd.
DART	
3030 ENTERPRISE COURT	1270 Aberdeen Street
SUITE A	
WISTA	Hawkesbury
CA 92081 US (760) 724-5300	ON K6A1K7 CA (613) 632-5200
ID/EIN:330685396	ID/EIN:

Broker	Importer
	Caitlin/Pat Smith
	Dart Aerospace Ltd.
	1270 Aberdeen Street
	Hawkesbury
	ON K6A1K7 CA (613) 632-5200
	ID/EIN:

Part Nbr:	650.4904	Marks/Nbrs:	Cntry MFG:	US Net Wgt:	2.00 lbs
IS Code:	8803.30.0010	Unit Qty: 2.00 EA	Unit Value:	Commodity Value:	612.00
			306.000000		

Desc: INFLATION SYSTEM ACTIVATION CABLE

Part Nbr:	650.8804	Marks/Nbrs:	Cntry MFG:	US Net Wgt:	1.00 lbs
IS Code:	8803.30.0010	Unit Qty: 2.00 EA	Unit Value:	Commodity Value:	2,000.00
			1,000.000000		

Desc: PILOT HANDLE AND CABLE ASSEMBLY

Part Nbr:	600.1400	Marks/Nbrs:	Cntry MFG:	US Net Wgt:	1.00 lbs
IS Code:	8803.30.0010	Unit Qty: 2.00 EA	Unit Value:	Commodity Value:	180.00
			90.000000		

Desc: PRESSURE CHART

Part Nbr:	650.8803	Marks/Nbrs:	Cntry MFG:	US Net Wgt:	1.00 lbs
IS Code:	8803.30.0010	Unit Qty: 2.00 EA	Unit Value:	Commodity Value:	1,620.00
			810.000000		

Desc: BACKUP HANDLE AND CABLE ASSY

Part Nbr:	650.5801	Marks/Nbrs:	Cntry MFG:	US Net Wgt:	1.00 lbs
IS Code:	8803.30.0010	Unit Qty: 2.00 EA	Unit Value:	Commodity Value:	1,500.00
			750.000000		

Desc: JUNCTION BOX

Total Shipment	8	Total Commodity	5912.00
Weight:		Value:	



These commodities, technology, or software were exported from the United States in accordance with the Export Administration Regulations. Diversion contrary to United States law is prohibited.

Terms of Sale: FCA
Freight: 0.00
Insurance: 0.00
Others: 0.00
Total Invoice Value: 5,912.00

I certify that the goods referenced in this invoice/sales contract originate under the rules of origin specified for these goods in the North American Free Trade Agreement (NAFTA), and that further production or any other operation outside the territories of the Parties has not occurred subsequent to production in the territories.

Status (check one):

☒ Producer ☐ Exporter of the certified goods.

Country of Origin (check one):

☒ United States ☐ Mexico ☐ Mexico and the United States

For purposes of determining the applicable preferential rate of duty as set out in Annex 02.2, in accordance with the marking rules or in each Party's schedule of tariff elimination.)

Jean Everette
Name

3030 Enterprise Ct. Ste A
Address

Logistics Supervisor
Title

Apical Industries, Inc. dba Dan
Company

760-724-5300
Telephone

760-755-9612
Fax

Jean Everette
Signature

1-26-17
Date

Comments:

- 1)
- 2)
- 3)

I declare all information in this invoice to be true and correct.

Signature of shipper: JEAN EVERETTE

1/26/2017

Jean Everette